

## Golden-winged Warbler

### Conservation and Management Opportunities throughout the Life Cycle

Tom Will, USFWS 

3<sup>rd</sup> Cerulean Warbler Summit

2<sup>nd</sup> Golden-winged Warbler Summit

Conservation Planning for Migrant and Resident Birds of the Northern Andes











**Bogotá, Colombia**  
**21 October 2008**

As assessed by the Breeding Bird Survey, Golden-winged Warbler (*Vermivora chrysoptera*) has declined by an average of 2.5% per year range-wide for the last 40 years, which places its current population at about 37% of pre-1966 levels. The species was identified as a 2004 Partners in Flight Watch List species requiring immediate action. With an estimated 65% of all breeding Golden-wings, Minnesota and Wisconsin share the major stewardship responsibility for achieving the Partners in Flight objective of doubling the continental population. We use local Minnesota/Wisconsin detection estimates, point counts in national forests, a northern Wisconsin habitat-stratified study, and a spring Golden-winged Warbler Atlas Project habitat protocol to predict spatially-explicit Golden-wing abundance across the region. In the context of projected Minnesota/Wisconsin forest management, aspen rotation, shrubland energy harvest, and exurban development, our model suggests that other early succession and lowland shrub community priority species that will benefit from Golden-wing conservation include Ruffed Grouse, American Woodcock, and Black-billed Cuckoo. Demographic analyses of two breeding populations suggest that low adult over-winter survival may be a major factor influencing Golden-wing decline, and an analysis of Golden-wing non-breeding season records suggests that the majority of the species spends the northern winter in the humid upper subtropical and montane forests of the Colombia Andes, generally above the zone of coffee production and most frequently in association with *Quercus humboldtii*. Colombian oak forests are disappearing rapidly and perhaps comprise the single most under-represented habitat in the northern Andes protected area network. Efforts to protect potentially limiting Golden-wing non-breeding habitat in endangered Andean oak forests will also benefit several resident Alliance for Zero Extinction threatened bird species, including Gorgeted Wood-Quail, Chestnut-capped Piha, and Colorful Puffleg.

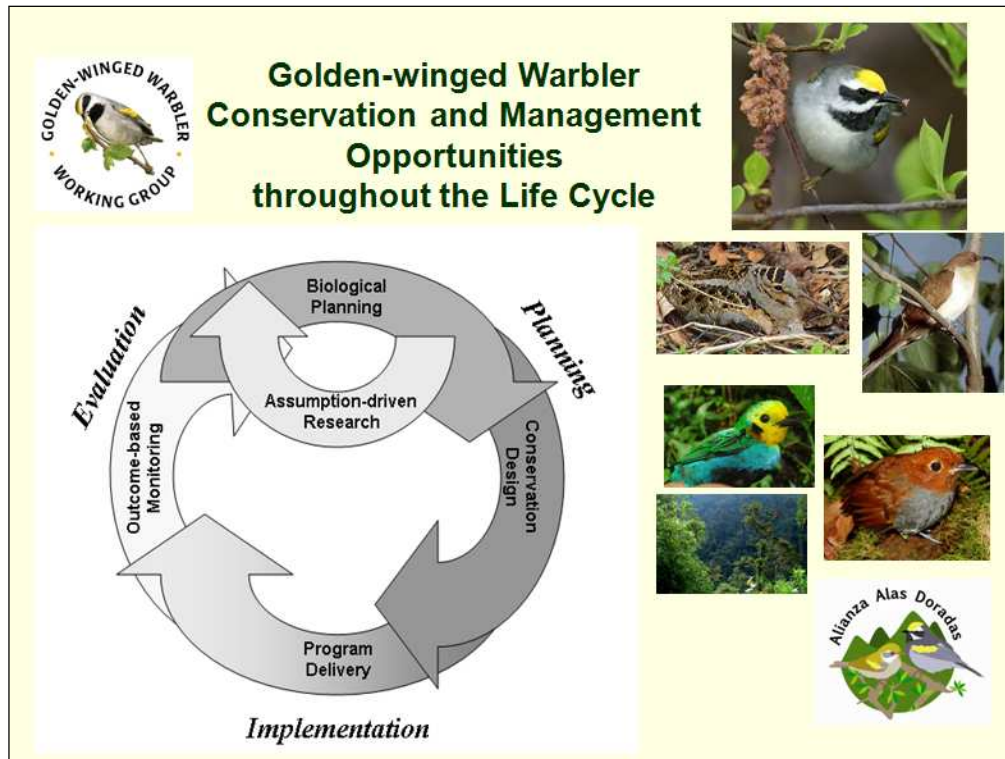
## Life-cycle Connections



## Golden-winged Warbler *Vermivora chrysoptera*



Golden-winged Warbler now 37% of its 1966 population. Discuss concept of stewardship and responsibility.



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## Opportunity in the Appalachians

- mine reclamation = Forest Reclamation Approach



FRA research plot



~ 5 - 7 yrs post reclamation

## Opportunity in the Appalachians

### ➤ fire management of reclaimed surface mines



burned 20 years after reclamation,  
maintained 5-yr cycle →

Dave Buehler, Kelly

## Opportunity in the Northeast

- ecological / genetic refugia?



Flag swamp, NY — John Confer

**MORE RESEARCH NEEDED !**



burned area, PA — Jeff Larkin

## Opportunity in the Upper Midwest

- **RESEARCH** What is the cumulative contribution of small, isolated habitat patches to the population? Can edges alone be managed for Golden-wings?





## Opportunity in the Upper Midwest

### ➤ forestry and biofuel production



study sites in Wisconsin — *Amber Roth & David Flaspohler*

## Opportunity in the Upper Midwest

### ► conservation/ preservation of shrub wetlands



alder swamp



tamarack bog

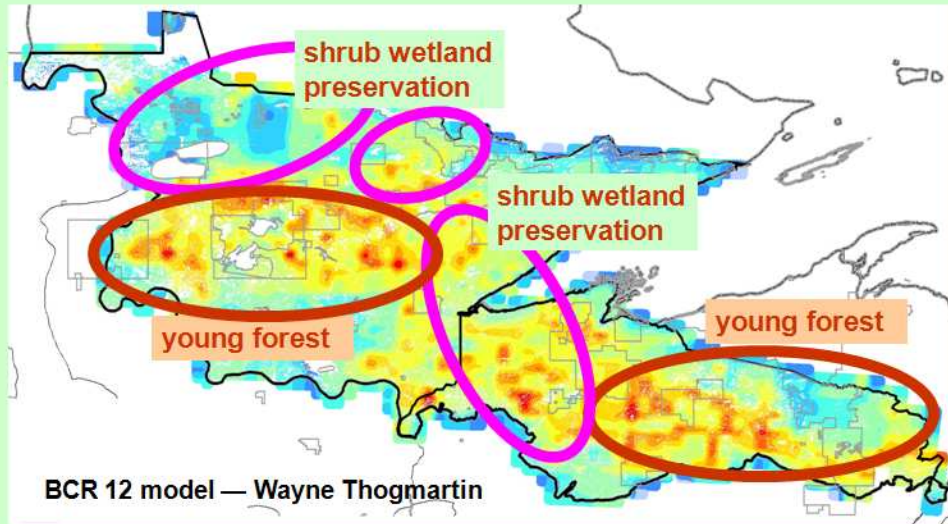


beaver wetland

Potential partners: flood control, water quality --- county water control boards, EPA

## Opportunity in the Upper Midwest

### ► Regional prioritization of primary management



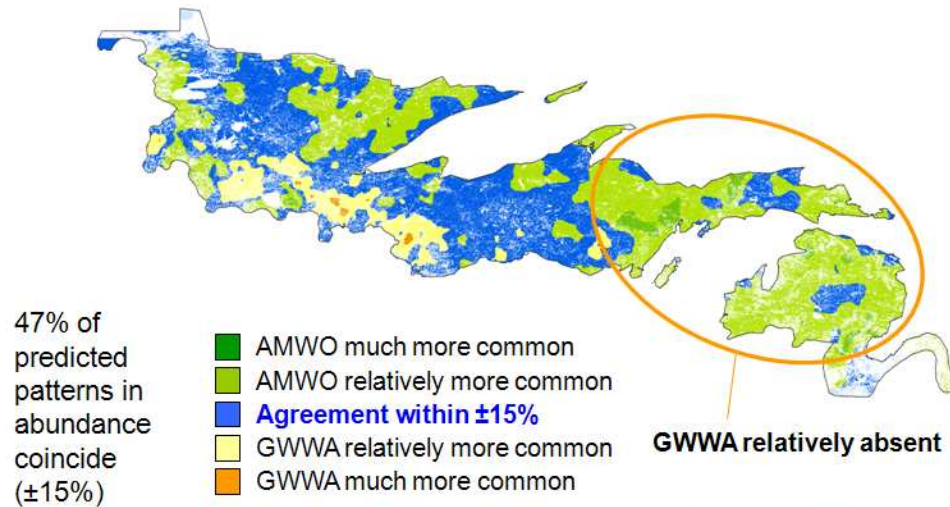
## Opportunity in the Upper Midwest

- Synergy with other species initiatives

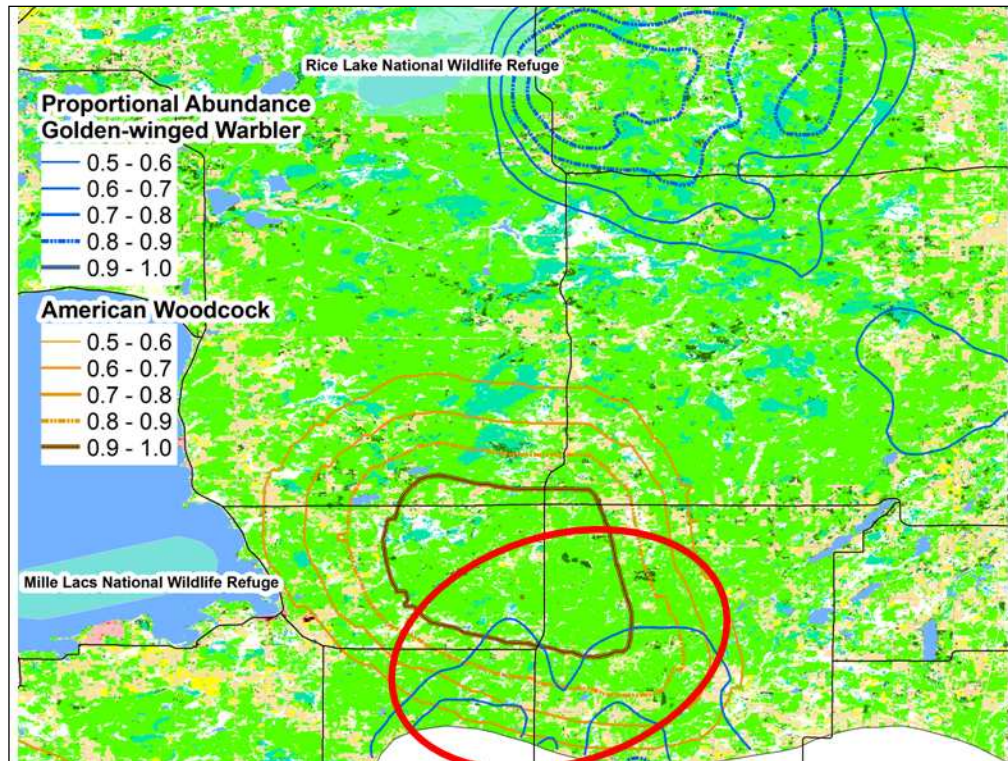




## American Woodcock & Golden-winged Warbler Model Agreement



— Wayne Thogmartin USGS



## Opportunity in Central America

➤ **MORE RESEARCH !** habitat and distribution



Surveys at suitable elevations across habitats in Costa Rica, Nicaragua, Panamá, Venezuela, and Colombia

Pilot project funded by NFWF  
currently underway Oct 07— Mar 08

Richard Chandler and David King (University of Massachusetts):  
habitat surveys and radio-tagged birds in Costa Rica

Priority Migrant eBird

## Opportunity in Central America

- synergy with shade/ organic/ corridor coffee production





## Opportunity in South America

- some overlap with Cerulean Warbler in coffee areas



1500 – 2600 m

oak forest, primarily broadleaf *Quercus humboldtii* forest mixed with Andean Alder *Alnus acuminata*

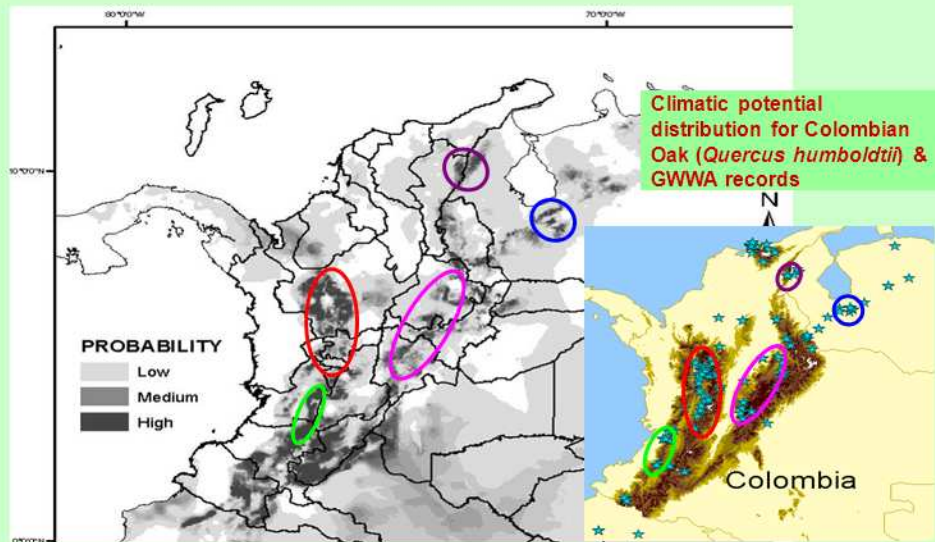
humid upper subtropical and montane forest

frequently close to water and denser vegetation on forest edges and in regenerating vegetation

Fewer records on coffee plantations

## Opportunity in Colombia

### ► overlap with Colombian oak forests



**1500 – 2600 m**

**oak forest, primarily broadleaf *Quercus humboldtii* forest mixed with Andean Alder *Alnus acuminata***

**humid upper subtropical and montane forest**

**frequently close to water and denser vegetation on forest edges and in regenerating vegetation**

**Fewer records on coffee plantations**

Tentative analysis indicates that GWWA is an Oak forest specialist of the Andes.

Oak forest is perhaps the Northern Andes most under-represented habitat in the protected area network.

Oak forest has been largely altered for pasturelands and cultivation, being rich upper subtropical and lower montane soils.

As little as 7.6% of Andean forest remains in some regions

We believe that as the species is a specialist of an endangered habitat that is under-protected, it is at risk and habitat loss in its core wintering areas could be hampering the species survival.

Present change detection indicates Andean forests continue to be declining

## ANDEAN OAK FOREST

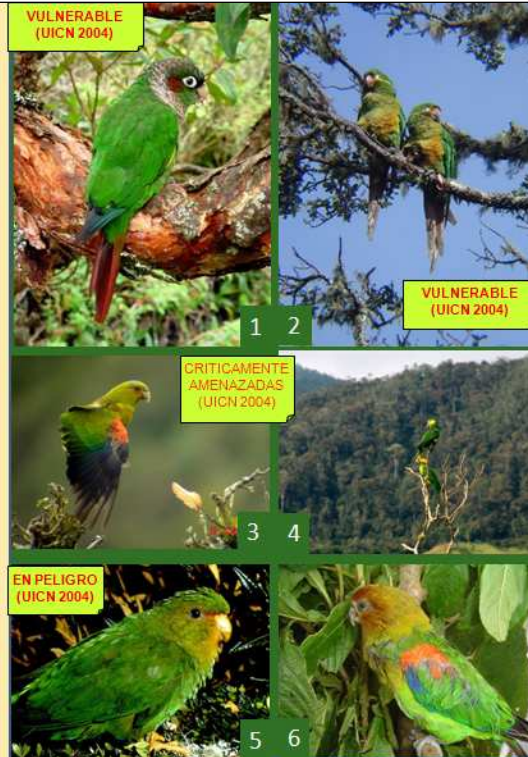
Oak forests are one of the most endangered habitat types of the Northern Andes and support one of the most specialized and threatened avifaunas of the region, with 29 globally threatened species.



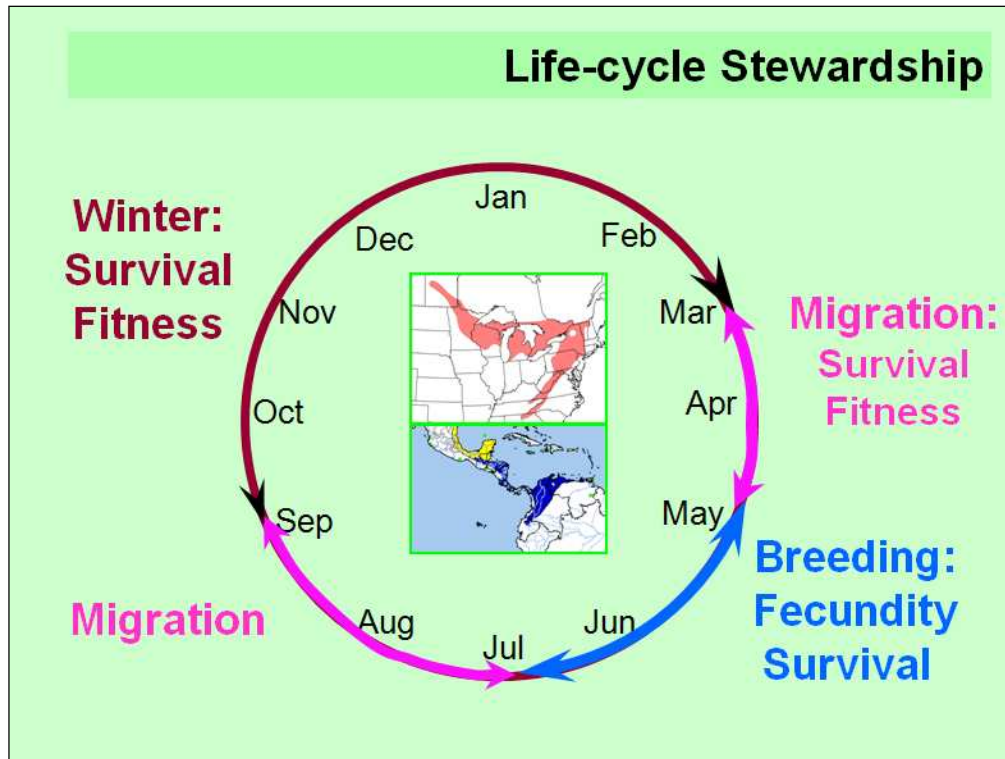
# PARROTS

- Parrots are one of the most threatened group of birds.
- 11 of 53 species in Colombia are endangered
- 7 species are related with oak forest.

- 1.Flame-winged Parraket
- 2.Golden-plumed Parakeet
- 3.Fuerte's Parrot
- 4.Yellow-earing Parrot
- 5.Rufous-fronted Prakeet
- 6.Rusty-faced Parrot
- 7.Spot-winged Parrotlet







In order to save birds, people need to stay connected and work together.

## Life Cycle Stewardship

- in order to save birds, people need to remain connected

